

ABSTRACT OF THE INVENTION

Inventive methods and apparatus are useful for collecting magnetic materials in one or more magnetic fields and resuspending the particles into a dispersion medium, and optionally repeating collection/resuspension one or more times in the same or a different medium, by controlling the direction and rate of fluid flow through a fluid flow path. The methods provide for contacting derivatized particles with test samples and reagents, removal of excess reagent, washing of magnetic material, and resuspension for analysis, among other uses. The methods are applicable to a wide variety of chemical and biological materials that are susceptible to magnetic labeling, including, for example, cells, viruses, oligonucleotides, proteins, hormones, receptor-ligand complexes, environmental contaminants and the like.

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